

PRINTER SERVER

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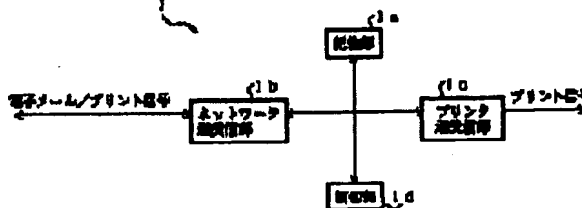
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Abstract of JP11312068

PROBLEM TO BE SOLVED: To provide a printer server for allowing a transmitter to surely and efficiently transmit an electronic mail to a receiving individual. **SOLUTION:** The network transmitting and receiving part 1b of a printer server 1 confirms whether or not an electronic mail to a prescribed electronic mail address destination stored in a storage part 1a arrives by performing access to a mail server at a prescribed time interval in response to a control part 1d. When the electronic mail arrives, the network transmitting and receiving part 1b reads the above according to an instruction of the control part 1d. Then, a printer transmitting and receiving part 1c operates code conversion so that the read electronic mail can be decoded by a printer, and outputs this to a printer port according to an instruction of the control part 1d. A printer connected with the printer port prints the electronic mail, and this electronic mail is transmitted to a receiving individual by this output. Also, validity/ invalidity of printing of the electronic mail is returned to the transmitter.



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Notes:

1. Untranslatable words are replaced with asterisks (****).
2. Texts in the figures are not translated and shown as it is.

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Dictionary: Last updated 09/07/2007 / Priority: 1. Information communication technology (ICT) / 2. Electronic engineering / 3. JIS (Japan Industrial Standards) term

FULL CONTENTS

[Claim(s)]

[Claim 1] An address storage means to memorize the e-mail address which is the criteria which discriminate from a specific E-mail among the E-mails which the mail server which performs ***** of an E-mail received, The E-mail reading means which discriminates from a specific E-mail based on the above-mentioned e-mail address, and is read from the above-mentioned mail server, An E-mail output means by which a printer outputs the E-mail read by the above-mentioned E-mail reading means to the printer port where it connected, The above-mentioned E-mail reading means is controlled so that the above-mentioned mail server checks whether the E-mail addressed to the above-mentioned e-mail address is received to the above-mentioned mail server with a predetermined time interval based on the above-mentioned e-mail address. The above-mentioned E-mail reading means is controlled to read this E-mail, when the E-mail addressed to the above-mentioned e-mail address is received.

The printer server characterized by having the control means which controls the above-mentioned E-mail output means to output this read E-mail to the above-mentioned printer port.

[Claim 2] Carried out two or more owners of the above-mentioned E-mail output means, and the above-mentioned address storage means has memorized two or more e-mail addresses.

[the control means] while the above-mentioned control means relates each of two or more above-mentioned e-mail addresses with either of two or more above-mentioned E-mail output means The above-mentioned E-mail output means related with the e-mail address of the receiver's address in the E-mail read by the above-mentioned E-mail reading means is controlled. The printer server according to claim 1 characterized by making it output to a predetermined printer port among two or more printer ports where the printer was connected.

[Claim 3] The printer server according to claim 1 or 2 characterized by for the above-mentioned control means detecting the state of the above-mentioned printer, and answering the sending person of the above-mentioned E-mail after the above-mentioned E-mail reading

means reads an E-mail.

[Claim 4] An E-mail accumulation means to be the printer server connected to the network where ***** of an E-mail is performed, and to accumulate the received E-mail, A specific E-mail selection means to choose the specific E-mail addressed to a predetermined e-mail address among the E-mails accumulated by the above-mentioned E-mail accumulation means, The printer server characterized by having a specific E-mail sending-out means by which a printer outputs the above-mentioned specific E-mail chosen by the above-mentioned specific E-mail selection means to the printer port where it connected.

[Claim 5] [carry out two or more owners of the above-mentioned specific E-mail sending-out means, and / the means / each of several above-mentioned specific E-mails with which e-mail addresses differ] while the above-mentioned specific E-mail selection means is selectable While relating each of two or more above-mentioned e-mail addresses with either of two or more above-mentioned E-mail sending-out means It points to the above-mentioned specific E-mail chosen by the above-mentioned specific E-mail selection means for the above-mentioned specific E-mail sending-out means related with the e-mail address of the receiver's address. The printer server according to claim 4 characterized by having the directions means made to output to a predetermined printer port among two or more printer ports where the printer was connected.

[Claim 6] The printer server according to claim 4 or 5 characterized by having a reply means to detect the state of the above-mentioned printer and to answer the sending person of the above-mentioned specific E-mail after the above-mentioned specific E-mail selection means chooses the above-mentioned specific E-mail.

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the communication network which performs ***** of an E-mail using a personal computer (a personal computer is called below), a UNIX device, etc.

[0002]

[Description of the Prior Art] The E-mail which exchanges document data, image data, voice data, etc. between the terminals through a mail server came to be frequently used with the spread of the Internet or LAN (Local Area Network). Since the troublesome work of an E-mail that a sending person records transmission information on paper as compared with the conventional FAX or mailing is unnecessary, its convenience is high.

[0003] For example, when transmitting information by FAX, information is processed with a

form as generally shown in drawing 13 . In this case, a sending person draws up a document with a personal computer 51 etc. first, and prints it by a printer 52. And the printed document is transmitted to FAX54 of a receiving side by FAX53. Thus, the paper which recorded transmission information as using FAX53 is needed. Of course, also in mailing, paper is needed.

[0004] On the other hand, when transmitting information with an E-mail, for example, as shown in drawing 14 , the address of the partner who is going to transmit the document drawn up with the personal computer 61 is specified, and it transmits. Then, it is once saved at the mail server 62 on LAN to which the personal computer 61 is connected, and is transmitted to the mail server 63 on LAN of a receiving side through a communication line. An addressee checks whether this mail server 63 was accessed using the peculiar password from the personal computer 64, and the E-mail addressed to itself has arrived, and if it has arrived, he will read the E-mail into his own personal computer 64 from this mail server 63. If required, the E-mail will be printed by a printer 65. Thus, if an E-mail is used, the sending person does not need to use paper for transfer of information.

[0005] Furthermore, when receiving by FAX54, unless equipment is assigned for every user, many users own jointly. Therefore, the work which classifies the FAX form received and printed for every user who is an addressee is also added. In that respect, since an E-mail can be distributed for every addressee from the start, its classification work is unnecessary. Moreover, since FAX has little receiving capacity, in order for the top where transmission speed is small to use the direct telephone line, a charge increases. On the other hand, transmission speed of an E-mail is larger than FAX, and there are also few charges, and it ends.

[0006]

[Problem to be solved by the invention] However, even if it tries to transmit information with an E-mail, that the environment where an E-mail is received is not ready, either has plentifully that there is no personal computer 64 connected to the Internet etc. to an addressee individual. Moreover, though such environment is ready, operation in which an addressee individual receives an E-mail at the terminal of a personal computer 64 etc. must be able to be known, or unless an addressee accesses a mail server 63, it cannot know that the E-mail arrived. Therefore, the problem that a sending person will print information on paper and will transmit to an addressee by FAX or mailing after all occurs.

[0007] This invention is made in view of the above-mentioned conventional problem, and the purpose is to offer the printer server which enables a sending person to transmit an E-mail to an addressee individual certainly and efficiently.

[0008]

[Means for solving problem] An address storage means to memorize the e-mail address which

is the criteria between which the printer server of invention concerning Claim 1 discriminates among the E-mails which the mail server which performs ***** of an E-mail received, The E-mail reading means which discriminates from a specific E-mail based on the above-mentioned e-mail address, and is read from the above-mentioned mail server, An E-mail output means by which a printer outputs the E-mail read by the above-mentioned E-mail reading means to the printer port where it connected, The above-mentioned E-mail reading means is controlled so that the above-mentioned mail server checks whether the E-mail addressed to the above-mentioned e-mail address is received to the above-mentioned mail server with a predetermined time interval based on the above-mentioned e-mail address. It is characterized by having the control means which controls the above-mentioned E-mail output means to control the above-mentioned E-mail reading means, and to output this read E-mail to the above-mentioned printer port so that this E-mail may be read, when the E-mail addressed to the above-mentioned e-mail address is received.

[0009] According to the above-mentioned invention, it connects with the network containing the mail server which performs ***** of an E-mail, and the printer server has an address storage means, an E-mail reading means, an E-mail output means, and a control means, and assumes the following operations.

[0010] The address storage means has memorized the e-mail address of the user who becomes an addressee. A control means controls an E-mail reading means, and is made to access a mail server with a predetermined time interval, and it is made to check whether, based on the e-mail address which the address storage means has memorized, the E-mail addressed to the above-mentioned e-mail address has reached the mail server. And when the E-mail addressed to the above-mentioned e-mail address has arrived, it controls so that a control means makes this E-mail read into an E-mail reading means. Subsequently, a control means is outputted to the above-mentioned printer port by controlling an E-mail output means and changing the read E-mail into the code which can decode the printer connected to the printer port. A printer receives and prints the above-mentioned E-mail from a printer port.

[0011] Therefore, when the addressee does not have the terminal of a personal computer etc., or even when [although it has the printer server,] the operating instructions are not known, it can print an E-mail by a printer and can transmit information. And it is possible to tell an addressee about the E-mail having arrived by print-out. Furthermore, except a printer server, the existing device can be diverted, and there is little plant-and-equipment investment and it ends.

[0012] As a result, the printer server which enables a sending person to transmit an E-mail to an addressee individual certainly and efficiently can be offered.

[0013] The printer server of invention concerning Claim 2 is set to a printer server according to claim 1. Carried out two or more owners of the above-mentioned E-mail output means, and the

above-mentioned address storage means has memorized two or more e-mail addresses. [the control means] while the above-mentioned control means relates each of two or more above-mentioned e-mail addresses with either of two or more above-mentioned E-mail output means. It is characterized by controlling the above-mentioned E-mail output means related with the e-mail address of the receiver's address in the E-mail read by the above-mentioned E-mail reading means, and making it output to a predetermined printer port among two or more printer ports where the printer was connected.

[0014] According to the above-mentioned invention, the address storage means has memorized two or more e-mail addresses for classifying the E-mail which arrived according to a receiving side etc. Two or more E-mail output means are established for similarly classifying and printing the E-mail which arrived etc. The control means relates each of two or more e-mail addresses with either of the E-mail output means. And when the E-mail addressed to a certain e-mail address of the above-mentioned e-mail addresses arrives, he is trying to make a predetermined E-mail output means output the E-mail to a predetermined printer port based on the above-mentioned correlation.

[0015] Therefore, an e-mail address can be assigned for every addressee, and the increase in efficiency of making an E-mail print by the printer connected to the printer port peculiar to each etc. can be attained. Or if a different e-mail address is beforehand told for every sending person, it can classify for every sending person and an E-mail can also be printed. As a result, the E-mail which arrived can be classified and printed according to the convenience of a receiving side.

[0016] In the printer server according to claim 1 or 2, the printer server of invention concerning Claim 3 is characterized by for the above-mentioned control means detecting the state of the above-mentioned printer, and answering the sending person of the above-mentioned E-mail, after the above-mentioned E-mail reading means reads an E-mail.

[0017] According to the above-mentioned invention, after an E-mail reading means reads an E-mail, a control means detects the state of a printer and answers a sending person. Namely, an E-mail cannot be printed [that the printer carried out the end of printing of the E-mail normally,] when the power supply of a form piece or a printer is OFF, Or it detects having stopped printing of the E-mail on the way with the form stick, the toner piece of the printer, etc., and a sending person is answered.

[0018] Therefore, the sending person of an E-mail can distinguish whether it is necessary to get to know and broadcast again what finally the transmitted E-mail became.

[0019] An E-mail accumulation means for the printer server of invention concerning Claim 4 to be a printer server connected to the network where ***** of an E-mail is performed, and to accumulate the received E-mail, A specific E-mail selection means to choose the specific E-mail addressed to a predetermined e-mail address among the E-mails accumulated by the

above-mentioned E-mail accumulation means, It is characterized by having a specific E-mail sending-out means to output the above-mentioned specific E-mail chosen by the above-mentioned specific E-mail selection means to the printer port where the printer connected.

[0020] According to the above-mentioned invention, it connects with the network where ***** of an E-mail is performed, and the printer server has an E-mail accumulation means, a specific E-mail selection means, and a specific E-mail sending-out means, and assumes the following operations.

[0021] An E-mail accumulation means accumulates the E-mail transmitted in a network in a hard disk etc. Subsequently, a specific E-mail selection means chooses the specific E-mail addressed to a predetermined e-mail address. The specific selected E-mail is changed into the code which can decode the printer connected to the printer port, and is outputted to the above-mentioned printer port by the specific E-mail sending-out means. A printer receives and prints the above-mentioned specific E-mail from a printer port.

[0022] Therefore, when the addressee does not have the terminal of a personal computer etc., or even when [although it has the printer server,] the operating instructions are not known, it can print an E-mail by a printer and can transmit information. And it is possible to tell an addressee about the E-mail having arrived by print-out. Furthermore, except a printer server, the printer server can divert the existing device, and there is little plant-and-equipment investment and it ends while the system which constitutes a network is simplified, since it also has the function of the mail server.

[0023] As a result, the printer server which enables a sending person to transmit an E-mail to an addressee individual certainly and efficiently can be offered.

[0024] The printer server of invention concerning Claim 5 is set to a printer server according to claim 4. [carry out two or more owners of the above-mentioned specific E-mail sending-out means, and / the means / each of several above-mentioned specific E-mails with which e-mail addresses differ] while the above-mentioned specific E-mail selection means is selectable While relating each of two or more above-mentioned e-mail addresses with either of two or more above-mentioned E-mail sending-out means It points to the above-mentioned specific E-mail chosen by the above-mentioned specific E-mail selection means for the above-mentioned specific E-mail sending-out means related with the e-mail address of the receiver's address. It is characterized by having the directions means made to output to a predetermined printer port among two or more printer ports where the printer was connected.

[0025] According to the above-mentioned invention, the specific E-mail selection means can choose now several specific E-mails with which e-mail addresses differ for classifying according to a receiving side [for the purpose of a specific E-mail] etc. Similarly two or more specific E-mail sending-out means are established for classifying and printing a specific E-mail etc. The directions means relates each of two or more e-mail addresses with either of the

specific E-mail sending-out means. And when the specific E-mail addressed to a certain e-mail address of the above-mentioned e-mail addresses is chosen, he is trying to make a specific predetermined E-mail sending-out means output the specific E-mail to a predetermined printer port based on the above-mentioned correlation.

[0026] Therefore, an e-mail address can be assigned for every addressee, and the increase in efficiency of making an E-mail print by the printer connected to the printer port peculiar to each etc. can be attained. Or if a different e-mail address is beforehand told for every sending person, it can classify for every sending person and an E-mail can also be printed. As a result, the E-mail which arrived can be classified and printed according to the convenience of a receiving side.

[0027] The printer server of invention concerning Claim 6 is set to a printer server according to claim 4 or 5. After the above-mentioned specific E-mail selection means chooses the above-mentioned specific E-mail, it is characterized by having a reply means to detect the state of the above-mentioned printer and to answer the sending person of the above-mentioned specific E-mail.

[0028] According to the above-mentioned invention, after a specific E-mail selection means chooses a specific E-mail, a reply means detects the state of a printer and answers a sending person. Namely, when the power supply of a form piece or a printer is OFF, a specific E-mail cannot be printed [that the printer carried out the end of printing of the specific E-mail normally,], Or it detects having stopped printing of the specific E-mail on the way with the form stick, the toner piece of the printer, etc., and a sending person is answered.

[0029] Therefore, the sending person of an E-mail can distinguish whether it is necessary to get to know and broadcast again what finally the transmitted E-mail became.

[0030]

[Mode for carrying out the invention] [Form 1 of operation] It will be as follows if one form of operation of the printer server of this invention is explained based on drawing 1 or drawing 3 .

[0031] An example of the network which equipped drawing 2 with the printer server of this invention is shown. A network consists of a transmitting-side network and a receiving-side network, and they are mutually connected by two-way communication circuits, such as the telephone line. Or you may perform ***** on radio. A transmitting-side network is LAN with the transmit terminal 2 and mail servers 3, such as a personal computer, at least. A receiving-side network is LAN with a mail server 4, a printer server 1, and a printer 5 at least. It is transmitted from the transmit terminal 2, and the printer server 1 which has a client function receives the E-mail which went via the mail server 3-4, and the network of the above-mentioned composition prints it by a printer 5, and is told to an addressee certainly and efficiently.

[0032] Next, the block diagram which expresses the composition of the printer server 1 of the form of this operation to drawing 1 is shown. A printer server 1 consists of the storage section

1a, network transmission-and-reception **** 1b, printer transmission-and-reception **** 1c, and 1d of control sections.

[0033] The storage section 1a as an address storage means stores in RAM, ROM, or a hard disk the e-mail address assigned to the user of the printer server 1. The memorized above-mentioned e-mail address serves as discrimination criteria in case network transmission-and-reception **** 1b reads an E-mail from a mail server 4 based on the directions from 1d of control sections mentioned later. An e-mail address is expressed, for example like "URL of the user name @ mail server 4." Moreover, the password currently used from the former as a safe bet which prevents data disclosure etc. is made to memorize, and when accessing a mail server 4, you may make it enter this password.

[0034] Network transmission-and-reception **** 1b as an E-mail reading means has the function to receive the print signal which flows on a network so that it may achieve the function as a general printer server first. Moreover, the function as a receive section which reads into RAM, a hard disk, etc. by making into a client the E-mail addressed to the above-mentioned e-mail address which reached the mail server 4, It has a function as the transmitting section at the time of whether the E-mail was normally printed by the printer 5 so that it might mention later, and answering a sending person. Furthermore, [using the e-mail address or password which network transmission-and-reception **** 1b has accessed the mail server 4 with the predetermined time interval based on the directions from control-section 1 d, and the storage section 1a has memorized] It is being checked whether the E-mail addressed to the above-mentioned e-mail address has arrived. In addition, as a protocol at the time of network transmission-and-reception **** 1b communicating with a mail server 4, POP(Post Office Protocol) 3 are used, for example. When the above-mentioned E-mail has arrived, the above-mentioned E-mail is read into RAM, a hard disk, etc. based on directions of 1d of control sections.

[0035] [printer transmission-and-reception **** 1c as an E-mail output means] First, it has a function as the transmitting section which transforms the E-mail which network transmission-and-reception **** 1b read into the code form which can decode a printer 5 according to directions of 1d of control sections, and is outputted to a printer 5 from the printer port as an interface. Moreover, it also has the function as a receive section which receives the signal about whether the E-mail was normally printed by the printer 5 from a printer 5 so that it may mention later. This printer transmission-and-reception **** 1c is realized as a code filter or a printer driver. A code filter changes code sequences, such as the EUC code which forms the data of an E-mail, into code sequences, such as JIS code which can decode a printer 5. A printer driver generates an output signal peculiar to the printer 5 outputted from a printer port, and the signal (a line feed code, PURIKODO / post code, etc. are included) for controlling the printer 5 connected to the printer port based on the code sequence changed as mentioned

above.

[0036] As mentioned above, 1d of control sections as a control means are controlled so that each component of a printer server 1 performs predetermined operation, and in order to realize such control, they work on CPU. Moreover, after outputting the E-mail read from the mail server 4 to a printer 5, Printing becomes impossible by the power supply of the form piece with which a printer 5 ends printing normally, or a printer 5 being come by off etc., or it may happen to stop printing by the toner piece of a form stick or a printer 5 on the way etc. When the signal which shows the state of such a printer 5 is transmitted from a printer 5, it controls to make printer transmission-and-reception **** 1c receive this signal. Furthermore, it controls to transmit this signal to network transmission-and-reception **** 1b in order to make this signal answer the sending person of an E-mail.

[0037] Next, the procedure of ***** (ing) an E-mail in the network of drawing 2 using the printer server 1 of the above-mentioned composition is explained, referring to the flow chart of drawing 3.

[0038] First, a sending person creates E-mails, such as a document, by the transmit terminal 2, and transmits to an addressee's e-mail address point. The transmitted E-mail is once accumulated in the mail server 3 of a transmitting-side network. And this E-mail is transmitted to the mail server 4 of a receiving-side network through a communication line, and a mail server 4 will accumulate this E-mail in that mail directory for users, if it checks that the above-mentioned E-mail is a thing addressed to the user of a mail server 4.

[0039] On the other hand, [network transmission-and-reception **** 1b of a printer server 1] It is being checked by accessing a mail server 4 with a predetermined time interval whether with the directions from 1d of control sections, the E-mail addressed to this e-mail address has reached the mail server 4 based on an addressee's e-mail address memorized by the storage section 1a (S1). Since a password is required of a printer server 1 for safety so that it may not read accidentally [mail server / 4 / third party / E-mail / this] at this time, network transmission-and-reception **** 1b sends out the password memorized by the storage section 1a to a mail server 4. When the above-mentioned E-mail has not reached a mail server 4 in S2, it returns and S1 is repeated.

[0040] When it is checked that the above-mentioned E-mail has reached the mail server 4 in S2, network transmission-and-reception **** 1b requires that the directions from 1d of control sections should send out this E-mail to a mail server 4 (S3). If a mail server 4 receives an E-mail transmission request, it progresses to S4, and an E-mail will be turned to a printer server 1, and will be sent out, and network transmission-and-reception **** 1b will read the above-mentioned E-mail into RAM, a hard disk, etc. in a printer server 1 with the directions from 1d of control sections.

[0041] On the other hand, 1d of control sections are always supervising the state of a printer 5

with the signal transmitted to printer transmission-and-reception **** 1c from a printer 5. When the power supply of a form piece or a printer 5 is come by off by S5 and it cannot print, it progresses to S10 and a printer server 1 answers the sending person of an E-mail from network transmission-and-reception **** 1b in a signal to that effect. Since the e-mail address at this time, for example, a reply place, is indicated as the From field to a part for the header unit of the E-mail transmitted previously, 1d of control sections of a printer server 1 direct the above-mentioned reply with reference to this. When a printer 5 can print by S5, it progresses to S6.

[0042] The read E-mail is changed into the code sequence which can decode a printer 5 in S6 by the code filter of printer transmission-and-reception **** 1c which received the directions from 1d of control sections. And according to directions of 1d of control sections, the printer driver of printer transmission-and-reception **** 1c generates output signals, such as a control signal based on the above-mentioned code sequence, and outputs them to the printer port of a printer server 1 (S7).

[0043] A printer 5 receives the output signal from a printer port, and starts printing of an E-mail (S8). A printer 5 will be in one of the states that it is finished normally whether printing an E-mail or whether the trouble of a form stick, a toner piece, etc. stops printing on the way, and will suspend print operation (S9). In S10, a sending person is answered like the method which stated by S5 whether the end of printing of the E-mail was carried out normally. It can be distinguished whether the sending person of an E-mail needs to get to know whether the E-mail which he transmitted was processed normally, and it is necessary to broadcast an E-mail again by this. Of course, a user can set up freely whether a sending person is answered in the state of a printer 5, and it can also send a reply only a specific state among the states of the printer 5 mentioned above.

[0044] In addition, although the printer 5 connected to the printer port of a printer server 1 was made to print an E-mail, you may make other printers connected not only to this but to the receiving-side network print in the form of this operation. However, when transmitting data to a printer server 1 in a receiving-side network, the amount of data which flows through a receiving-side network depending on data increases, this load becomes large to a receiving-side network, and a throughput (transfer rate) declines. Therefore, as for a printer, it is desirable to link with a printer server 1 directly like the form of this operation.

[0045] As mentioned above, if the printer server 1 of the form of this operation is used, the E-mail transmitted to addressing to a user of a printer server 1 can be taken in from the transmit terminal 2, and the printer 5 connected to the printer server 1 can be made to print. As a result, the following effects are acquired compared with transfer of the information by FAX or the conventional Internet.

[0046] The sending person can save the time and effort of printing beforehand the information

on the document which is going to transmit on paper, in comparison with FAX. Moreover, by FAX, if it tries to perform many to many communication, it is necessary to extend a circuit for exclusive use and FAX equipment so much. On the other hand, in the Internet circuit for E-mail transmission and reception, since data communication is performed by packet switching, unless channel capacity is exceeded, many to many communication is possible in the existing circuit, and it is not necessary to extend a circuit for exclusive use. On the other hand, about a printer server 1, a mail server 4, and a printer 5, if the printing demand from the network of a receiving side is not over the throughput, it is not necessary to extend, either. Thus, since configuration equipment other than printer server 1 can use the conventional thing, there is the advantage in which equipment introduction is easier than the case where the hardware environment of FAX is prepared in the network which has the printer server 1 of the form of this operation.

[0047] Moreover, the user of a receiving side can save the time and effort of directing printing of the E-mail which operated accepting stations, such as a personal computer, and was received, in comparison with the conventional Internet. Furthermore, although the user needed to access the mail server 4 and needed to check conventionally that the E-mail had arrived In the network which has the printer server 1 of the form of this operation, since it will be automatically printed if an E-mail is received, arrival of an E-mail can be checked easily. Furthermore, although the E-mail which connected the printer to each of an accepting station conventionally, and was received was printed If the printer server 1 of the form of this operation which has a client function is used, since the print data from a network besides an E-mail can be printed only by the printer connected to the printer server 1, a system can be simplified.

[0048] Moreover, when the composition which enables the exterior to use of the printer server itself as a comparative example is considered, there are the following advantages in the network which has the printer server 1 of the form of this operation. In order to enable use of a printer server from the exterior, it is necessary to open data format, such as LPT which can process not only an IP address but a printer server, and a printer, to the exterior. However, since such data format will also be changed if a printer server and a printer are changed, it must stop having to release new information outside each time, and the exchange with the exterior becomes complicated. Moreover, when the information to release increases, there is a problem also in respect of safeties, such as network confidentiality maintenance.

[0049] On the other hand, the safety of the printer server 1 of the form of this operation is high in order to only exhibit an e-mail address outside. Moreover, since it cannot be concerned with the data format which a printer server 1 and a printer 5 can process but the same e-mail address can be used, when changing a printer server 1 and a printer 5, it is not necessary to notify this outside.

[0050] [Form 2 of operation] It will be as follows if the form of other operations of the printer server of this invention is explained using drawing 4 or drawing 6 . In addition, the sign same about the component described with the form 1 of operation and the component which has the same function is attached, and the explanation is omitted.

[0051] The printer server 11 of the form of this operation is equipped with two or more printer transmission-and-reception **** 1c as an E-mail output means as shown in drawing 4 , and also it is the same composition as the form 1 of operation. Moreover, the printer 5 is connected to the printer port corresponding to each of two or more printer transmission-and-reception **** 1c-- in the network shown in drawing 5 .

[0052] The correspondence table, two or more e-mail addresses, and printer transmission-and-reception **** 1c with which each e-mail address is related, i.e., a printer port, is memorized by the storage section 1a. For example, correlation is carried out to the condition of a printer port A by e-mail address a at a printer port A and e-mail address b at a printer port B and e-mail address c. It is the feature of a printer server 11 that 1d of control sections distribute this E-mail to a predetermined printer port, and make printer 5 -- output based on this correspondence table according to the e-mail address of the transmitted E-mail.

[0053] Thus, if two or more e-mail addresses are made to memorize and the E-mail of each e-mail address is made to output from a corresponding printer port, it is convenient when as follows. For example, it is the case where he wants to change the printer 5 by which an E-mail is printed for every addressee of an E-mail. In this case, all the E-mails by which all the E-mails printed by the 1st printer 5 are printed by the thing addressed to user M and the 2nd printer 5 have an advantage, like it turns out that it is a thing addressed to user N.

[0054] Moreover, it is the case where he wants to change the printer 5 by which an E-mail is printed for every sending person of an E-mail. It carries out [having notified the sending person X or Company Y of one chosen among all the e-mail addresses beforehand, and]. In this case, all the E-mails printed by the 1st printer 5 have an advantage, like it turns out that it is a thing from a sending person X or Company Y. That is, the received E-mail can be automatically sorted by a receiving side.

[0055] In addition, to the correspondence table memorized by the storage section 1a, the priority of printer transmission-and-reception **** 1c related with each e-mail address, i.e., a printer port, is indicated. When following this correspondence table and it is going to make the printer 5 connected to the 1st candidate's printer port print a certain E-mail, supposing it is in the state which this printer 5 cannot print It was able to be said that it made this print in search of the printer 5 which is connected to the 2nd less than candidate's printer port and which can be printed in order.

[0056] Next, the procedure of ***** (ing) an E-mail in the network of drawing 5 using the printer server 11 of the above-mentioned composition is explained, referring to the flow chart of

drawing 6 .

[0057] First, a sending person creates E-mails, such as a document, by the transmit terminal 2, and transmits to an addressee's e-mail address point. The transmitted E-mail is once accumulated in the mail server 3 of a transmitting-side network. And this E-mail is transmitted to the mail server 4 of a receiving-side network through a communication line, and a mail server 4 will accumulate this E-mail in that mail directory for users, if it checks that the above-mentioned E-mail is a thing addressed to the user of a mail server 4.

[0058] On the other hand, [network transmission-and-reception **** 1b of a printer server 11] It is being checked by accessing a mail server 4 with a predetermined time interval whether with the directions from 1d of control sections, the E-mail addressed to this e-mail address has reached the mail server 4 based on an addressee's e-mail address memorized by the storage section 1a (S21). Since a password is required of a printer server 1 for safety so that it may not read accidentally [mail server / 4 / third party / E-mail / this] at this time, network transmission-and-reception **** 1b sends out the password memorized by the storage section 1a to a mail server 4. When the above-mentioned E-mail has not reached a mail server 4 in S22, it returns and S21 is repeated.

[0059] When it is checked that the above-mentioned E-mail has reached the mail server 4 in S22, network transmission-and-reception **** 1b requires that the directions from 1d of control sections should send out this E-mail to a mail server 4 (S23). If a mail server 4 receives an E-mail transmission request, it progresses to S24, and an E-mail will be turned to a printer server 11, and will be sent out, and network transmission-and-reception **** 1b will read the above-mentioned E-mail into RAM, a hard disk, etc. in a printer server 11 with the directions from 1d of control sections.

[0060] On the other hand, 1d of control sections are always printers 5 by the signal transmitted to printer transmission-and-reception **** 1c-- from printer 5 --. -- The state is supervised. And 1d of control sections choose the printer port which outputs an E-mail based on the correspondence table of the e-mail address memorized by the storage section 1a and printer transmission-and-reception **** 1c, i.e., a printer port. Since the priority of the printer port related with the above-mentioned correspondence table at an e-mail address is indicated at this time For example, when the printer 5 connected to the printer port of the 1st candidate corresponding to a certain E-mail can print with neither a form piece nor a power supply OFF, it progresses to S31 from S25, and a low rank candidate's printer port which a printer 5 can print is looked for in order.

[0061] When the printer port where the printer 5 which can print by S32 is connected is found, it progresses to S26. Progressing to S30, when the printer port where the printer 5 which can print is connected on the other hand is not found, a printer server 11 answers the sending person of an E-mail from network transmission-and-reception **** 1b in a signal to that effect.

Since the e-mail address at this time, for example, a reply place, is indicated as the From field to a part for the header unit of the E-mail transmitted previously, 1d of control sections of a printer server 11 direct the above-mentioned reply with reference to this.

[0062] The read E-mail is changed into the code sequence which can decode printer 5 -- in S26 by the code filter of printer transmission-and-reception **** 1c which received the directions from 1d of control sections. Furthermore, printer transmission-and-reception **** 1c is outputted to the printer port which generated and chose output signals, such as a control signal based on the above-mentioned code sequence, with the printer driver according to directions of 1d of control sections (S27).

[0063] Next, a printer 5 receives the above-mentioned output signal, and starts printing of an E-mail (S28). A printer 5 will be in one of the states that it is finished normally whether printing an E-mail or whether the trouble of a form stick, a toner piece, etc. stops printing on the way, and will suspend print operation (S29). In S30, a sending person is answered [whether a printer 5 finish printing an E-mail normally and] like an above-mentioned method. It can be distinguished whether the sending person of an E-mail needs to get to know whether the E-mail which he transmitted was processed normally, and it is necessary to broadcast an E-mail again by this. Of course, a user can set up freely whether a sending person is answered in the state of a printer 5, and it can also send a reply only a specific state among the states of the printer 5 mentioned above.

[0064] As mentioned above, since according to the printer server 11 of the form of this operation two or more printer transmission-and-reception **** 1c-- is made to correspond to either of two or more printer ports and the e-mail address is related with each printer transmission-and-reception **** 1c, It can sort automatically [for the purpose of the E-mail printed by a receiving side]. In addition, of course, the effect described with the form 1 of operation is acquired.

[0065] [Form 3 of operation] It will be as follows if the form of the operation of further others of the printer server of this invention is explained based on drawing 7 or drawing 9 . In addition, the sign same about the component described with the forms 1 and 2 of operation and the component which has the same function is attached, and the explanation is omitted.

[0066] An example of the network which equipped drawing 8 with the printer server of this invention is shown. A network consists of a transmitting-side network and a receiving-side network, and they are mutually connected by two-way communication circuits, such as the telephone line. Or you may perform ***** on radio. A transmitting-side network is LAN with the transmit terminal 2 and mail servers 3, such as a personal computer, at least. A receiving-side network is LAN with a printer server 21 and a printer 5 at least. It is transmitted from the transmit terminal 2, and the printer server 21 which has a mail server function receives the E-mail which went via the mail server 3, and the network of the above-mentioned composition

prints it by a printer 5, and is told to an addressee certainly and efficiently.

[0067] Next, the block diagram which expresses the composition of the printer server 21 of the form of this operation to drawing 7 is shown. A printer server 21 consists of network transmission-and-reception **** 21a, the accumulation section 21b, the selection section 21c, 21d of printer transmission-and-reception ****, and a control section 21e.

[0068] Network transmission-and-reception **** 21a has a function as Interface Division received according to the directions from the control section 21e which mentions the thing addressed to the client of a receiving-side network later among the E-mails which flow on a network. Moreover, the function as Interface Division at the time of answering a sending person also has whether the E-mail was normally printed by the printer 5 so that it might mention later.

[0069] The accumulation section 21b as an E-mail accumulation means accumulates the E-mail received by network transmission-and-reception **** 21a in the directory for users in storages, such as a hard disk, according to the directions from a control section 21e.

[0070] Refer to RAM and ROM which memorized the e-mail address assigned to the user of the printer server 21, or the hard disk for the selection section 21c as a specific E-mail selection means according to the directions from a control section 21e. An e-mail address is expressed, for example like a "user name @ host domain name." And it has the function which chooses the specific E-mail which has the above-mentioned e-mail address from the E-mail accumulated in the accumulation section 21b according to the directions from a control section 21e, and is read into RAM or a hard disk.

[0071] 21d of printer transmission-and-reception **** as a specific E-mail output means have a function as Interface Division which transforms first the specific E-mail which the selection section 21c chose into the code form which can decode a printer 5 according to directions of a control section 21e, and is outputted to a printer 5 from a printer port. Moreover, it also has the function as Interface Division to receive the signal about whether the specific E-mail was normally printed by the printer 5 from a printer 5 so that it may mention later.

[0072] 21d of this printer transmission-and-reception **** is realized as a code filter or a printer driver. A code filter changes code sequences, such as the EUC code which forms the data of an E-mail, into code sequences, such as JIS code which can understand a printer 5. A printer driver generates an output signal peculiar to the printer 5 outputted from a printer port, and the signal (a line feed code, PURIKODO / post code, etc. are included) for controlling the printer 5 connected to the printer port based on the code sequence changed as mentioned above.

[0073] As mentioned above, the control section 21e as a control means is controlled so that each component of a printer server 21 performs predetermined operation, and in order to realize such control, it works on CPU. Moreover, after outputting a specific E-mail to a printer 5, printing becomes impossible by the power supply of the form piece with which a printer 5

ends printing normally, or a printer 5 being come by off etc., or it may happen to stop printing by the toner piece of a form stick or a printer 5 on the way etc. When the signal which shows the state of such a printer 5 is transmitted from a printer 5, it controls to make 21d of printer transmission-and-reception **** receive this signal. Furthermore, it has a function as a reply means which controls to transmit this signal to network transmission-and-reception **** 21a in order to make this signal answer the sending person of a specific E-mail.

[0074] Next, the procedure of ***** (ing) an E-mail is explained, referring to the flow chart of drawing 9.

[0075] First, a sending person creates E-mails, such as a document, by the transmit terminal 2, and transmits to an addressee's e-mail address point. The transmitted E-mail is once accumulated in the mail server 3 of a transmitting-side network. And this E-mail is transmitted to the printer server 21 of a receiving-side network through a communication line. If it checks that the above-mentioned E-mail is a thing addressed to the client of a receiving-side network, a printer server 21 will receive this E-mail by network transmission-and-reception **** 21a, and will accumulate the above-mentioned E-mail in that mail directory for users by the accumulation section 21b (S31). [0076] The selection section 21c chooses the specific E-mail addressed to the above-mentioned e-mail address among the E-mails accumulated in the accumulation section 21b by directions of the control section 21e with reference to the predetermined e-mail address which is memorized by RAM, ROM, or the hard disk, and which should be printed. And the specific selected E-mail is read into RAM, a hard disk, etc. (S32).

[0077] On the other hand, the control section 21e is always supervising the state of a printer 5 with the signal transmitted to 21d of printer transmission-and-reception **** from a printer 5. When the power supply of a form piece or a printer 5 is come by off by S33 and it cannot print, it progresses to S38 and a printer server 1 answers the sending person of an E-mail from network transmission-and-reception **** 21a in a signal to that effect. Since the e-mail address at this time, for example, a reply place, is indicated as the From field to a part for the header unit of the E-mail transmitted previously, the control section 21e of a printer server 1 directs the above-mentioned reply with reference to this. When a printer 5 can print by S33, it progresses to S34.

[0078] The read specific E-mail is changed into the code sequence which can decode a printer 5 in S34 by the code filter of 21d of printer transmission-and-reception **** which received the directions from a control section 21e. Furthermore, with directions of a control section 21e, output signals, such as a control signal based on the above-mentioned code sequence, are generated, and it is outputted to the printer port of a printer server 21 by the printer driver of 21d of printer transmission-and-reception **** (S35).

[0079] Printing will be started if a printer 5 receives the output signal from a printer port (S36). A printer 5 will be in one of the states that it is finished normally whether printing an E-mail or

whether the trouble of a form stick, a toner piece, etc. stops printing on the way, and will suspend print operation (S37). In S38, a sending person is answered [whether the end of printing of the E-mail was carried out normally, and] like an above-mentioned method. It can be distinguished whether the sending person of an E-mail needs to get to know whether the E-mail which he transmitted was processed normally, and it is necessary to broadcast an E-mail again by this. Of course, a user can set up freely whether a sending person is answered in the state of a printer 5, and it can also send a reply only a specific state among the states of the printer 5 mentioned above.

[0080] As mentioned above, since the printer server 21 of the form of this operation has a mail server function and a printer server function, in addition to the effect of the forms 1 and 2 of operation, it can simplify a system.

[0081] [Form 4 of operation] It will be as follows if the form of the operation of further others of the printer server of this invention is explained using drawing 10 or drawing 12 . In addition, the sign same about the component described with the forms 1 to 3 of operation and the component which has the same function is attached, and the explanation is omitted.

[0082] The printer server 31 of the form of this operation is equipped with two or more 21d of printer transmission-and-reception **** as a specific E-mail sending-out means as shown in drawing 10 , and also it is the same composition as the form 3 of operation. Moreover, the printer 5 is connected to the printer port corresponding to each of 21d of two or more printer transmission-and-reception **** -- in the network shown in drawing 11 . The correspondence table, two or more e-mail addresses, and 21d of printer transmission-and-reception **** with which each e-mail address is related, i.e., a printer port, is memorized by RAM, ROM, or the hard disk. It is the feature of a printer server 31 that a control section 21e distributes this specific E-mail to a predetermined printer port, and makes it output to printer 5 -- based on this correspondence table according to the e-mail address of the specific E-mail chosen by the selection section 21b.

[0083] Thus, if two or more e-mail addresses are made to memorize and the specific E-mail of each e-mail address is made to output from a corresponding printer port, it is convenient when as follows. For example, it is the case where he wants to change the printer 5 by which a specific E-mail is printed for every addressee of a specific E-mail. In this case, all the specific E-mails by which all the specific E-mails printed by the 1st printer 5 are printed by the thing addressed to user A and the 2nd printer 5 have an advantage, like it turns out that it is a thing addressed to user B.

[0084] Moreover, it is the case where he wants to change the printer 5 by which a specific E-mail is printed for every sending person of a specific E-mail. It carries out [having notified the sending person X or Company Y of one chosen among all the e-mail addresses beforehand, and]. In this case, all the specific E-mails printed by the 1st printer 5 have an advantage, like it

turns out that it is a thing from a sending person X or Company Y. That is, the received specific E-mail can be automatically sorted by a receiving side.

[0085] In addition, to the correspondence table memorized by RAM, ROM, or the hard disk, the priority of 21d of printer transmission-and-reception **** related with each e-mail address, i.e., a printer port, is indicated. When following this correspondence table and it is going to make the printer 5 connected to the 1st candidate's printer port print a certain specific E-mail, supposing it is in the state which this printer 5 cannot print It was able to be said that it made this print in search of the printer 5 which is connected to the 2nd less than candidate's printer port and which can be printed in order.

[0086] Next, the procedure of ***** (ing) an E-mail in the network of drawing 11 using the printer server 31 of the above-mentioned composition is explained, referring to the flow chart of drawing 12 .

[0087] First, a sending person creates E-mails, such as a document, by the transmit terminal 2, and transmits to an addressee's e-mail address point. The transmitted E-mail is once accumulated in the mail server 3 of a transmitting-side network. And this E-mail is transmitted to the printer server 21 of a receiving-side network through a communication line. If it checks that the above-mentioned E-mail is a thing addressed to the client of a receiving-side network, a printer server 21 will receive this E-mail by network transmission-and-reception **** 21a, and will accumulate the above-mentioned E-mail in that mail directory for users by the accumulation section 21b (S41).

[0088] The selection section 21c chooses the specific E-mail addressed to the above-mentioned e-mail address among the E-mails accumulated in the accumulation section 21b by directions of the control section 21e with reference to the predetermined e-mail address which is memorized by RAM, ROM, or the hard disk, and which should be printed. And the specific selected E-mail is read into RAM, a hard disk, etc. (S42).

[0089] And 21d of printer transmission-and-reception **** choose the printer port of the printer server 31 which outputs the above-mentioned specific E-mail with directions of a control section 21e based on the correspondence table of the e-mail address and printer port which are memorized by RAM, ROM, or the hard disk. Since the priority of the printer port related with the above-mentioned correspondence table at an e-mail address is indicated at this time For example, when the printer 5 connected to the 1st candidate's printer port can print with neither a form piece nor a power supply OFF, it progresses to S49 from S43, and a low rank candidate's printer port which a printer 5 can print is looked for in order.

[0090] When the printer port where the printer 5 which can print by S50 is connected is found, it progresses to S44. Progressing to S48, when the printer port where the printer 5 which can print is connected on the other hand is not found, a control section 21e answers the sending person of a specific E-mail from network transmission-and-reception **** 21a in a signal to that

effect. Since the e-mail address at this time, for example, a reply place, is indicated as the From field to a part for the header unit of the E-mail transmitted previously, the control section 21e of a printer server 31 directs the above-mentioned reply with reference to this.

[0091] The read E-mail is changed into the code sequence which can decode a printer 5 in S44 by the code filter of 21d of printer transmission-and-reception **** which received the directions from a control section 21e. Furthermore, by the printer driver of 21d of printer transmission-and-reception ****, output signals, such as a control signal based on the above-mentioned code sequence, are generated, and are outputted to the selected printer port (S45).

[0092] Next, a printer 5 will start printing of a specific E-mail, if the above-mentioned output signal is received (S46). A printer 5 will be in one of the states that it is finished normally whether printing a specific E-mail or whether the trouble of a form stick, a toner piece, etc. stops printing on the way, and will suspend print operation (S47). In S48, a sending person is answered [whether a printer 5 finish printing an E-mail normally and] like an above-mentioned method. It can be distinguished whether the sending person of an E-mail needs to get to know whether the E-mail which he transmitted was processed normally, and it is necessary to broadcast an E-mail again by this. Of course, a user can set up freely whether a sending person is answered in the state of a printer 5, and it can also send a reply only a specific state among the states of the printer 5 mentioned above.

[0093] As mentioned above, since according to the printer server 31 of the form of this operation 21d of two or more printer transmission-and-reception **** -- is made to correspond to either of two or more printer ports and the e-mail address is related with 21d of each printer transmission-and-reception ****, It can sort automatically [for the purpose of the specific E-mail printed by a receiving side]. In addition, of course, the effect described with the form 3 of operation is acquired.

[0094]

[Effect of the Invention] An address storage means to memorize the e-mail address which is the criteria between which the printer server of invention concerning Claim 1 discriminates among the E-mails which the mail server which performs ***** of an E-mail received as mentioned above, The E-mail reading means which discriminates from a specific E-mail based on the above-mentioned e-mail address, and is read from the above-mentioned mail server, An E-mail output means by which a printer outputs the E-mail read by the above-mentioned E-mail reading means to the printer port where it connected, The above-mentioned E-mail reading means is controlled so that the above-mentioned mail server checks whether the E-mail addressed to the above-mentioned e-mail address is received to the above-mentioned mail server with a predetermined time interval based on the above-mentioned e-mail address. When the E-mail addressed to the above-mentioned e-mail address is received, as this E-mail

is read, the above-mentioned E-mail reading means is controlled, and it is the composition of having the control means which controls the above-mentioned E-mail output means to output this read E-mail to the above-mentioned printer port.

[0095] So, when the addressee does not have the terminal of a personal computer etc., or even when [although the sending person of the E-mail has,] the operating instructions are not known, he can print an E-mail by a printer and can transmit information. And the addressee can get to know that the E-mail arrived by print-out. Furthermore, except a printer server, the existing device can be diverted, and there is little plant-and-equipment investment and it ends.

[0096] As a result, the effect that the printer server which enables a sending person to transmit an E-mail to an addressee individual certainly and efficiently can be offered is done so.

[0097] The printer server of invention concerning Claim 2 is set to a printer server according to claim 1 as mentioned above. Carried out two or more owners of the above-mentioned E-mail output means, and the above-mentioned address storage means has memorized two or more e-mail addresses. [the control means] while the above-mentioned control means relates each of two or more above-mentioned e-mail addresses with either of two or more above-mentioned E-mail output means It is the composition made to output to a predetermined printer port among two or more printer ports where the above-mentioned E-mail output means related with the e-mail address of the receiver's address in the E-mail read by the above-mentioned E-mail reading means was controlled, and the printer was connected.

[0098] So, an e-mail address is assigned for every addressee, and the effect that the increase in efficiency of making an E-mail print by the printer connected to the printer port peculiar to each etc. can be attained is done. Or if a different e-mail address is beforehand told for every sending person, it can classify for every sending person and an E-mail can also be printed. As a result, the effect that the E-mail which arrived can be classified and printed according to the convenience of a receiving side is done so.

[0099] As mentioned above, in a printer server according to claim 1 or 2, the printer server of invention concerning Claim 3 is the composition of the above-mentioned control means detecting the state of the above-mentioned printer, and answering the sending person of the above-mentioned E-mail, after the above-mentioned E-mail reading means reads an E-mail.

[0100] So, the sending person of an E-mail does the effect that it can be distinguished whether it is necessary to get to know and broadcast again what the transmitted E-mail finally became.

[0101] An E-mail accumulation means for the printer server of invention concerning Claim 4 to be a printer server connected to the network where ***** of an E-mail is performed as mentioned above, and to accumulate the received E-mail, A specific E-mail selection means to choose the specific E-mail addressed to a predetermined e-mail address among the E-mails accumulated by the above-mentioned E-mail accumulation means, It is the composition of having a specific E-mail sending-out means to output to the printer port where the above-

mentioned specific E-mail chosen by the above-mentioned specific E-mail selection means was connected in the printer.

[0102] So, when the addressee does not have the terminal of a personal computer etc., or even when [although the sending person of the E-mail has,] the operating instructions are not known, he can print an E-mail by a printer and can transmit information. And the addressee can get to know that the E-mail arrived by print-out. Furthermore, except a printer server, the printer server can divert the existing device, and there is little plant-and-equipment investment and it ends while the system which constitutes a network is simplified, since it also has the function of the mail server.

[0103] As a result, the effect that the printer server which enables a sending person to transmit an E-mail to an addressee individual certainly and efficiently can be offered is done so.

[0104] The printer server of invention concerning Claim 5 is set to a printer server according to claim 4 as mentioned above. [carry out two or more owners of the above-mentioned specific E-mail sending-out means, and / the means / each of several above-mentioned specific E-mails with which e-mail addresses differ] while the above-mentioned specific E-mail selection means is selectable While relating each of two or more above-mentioned e-mail addresses with either of two or more above-mentioned E-mail sending-out means It points to the above-mentioned specific E-mail chosen by the above-mentioned specific E-mail selection means for the above-mentioned specific E-mail sending-out means related with the e-mail address of the receiver's address. It is the composition of having the directions means made outputting to a predetermined printer port among two or more printer ports where the printer was connected.

[0105] So, an e-mail address is assigned for every addressee, and the effect that the increase in efficiency of making an E-mail print by the printer connected to the printer port peculiar to each etc. can be attained is done. Or if a different e-mail address is beforehand told for every sending person, it can classify for every sending person and an E-mail can also be printed. As a result, the effect that the E-mail which arrived can be classified and printed according to the convenience of a receiving side is done so.

[0106] The printer server of invention concerning Claim 6 is set to a printer server according to claim 4 or 5 as mentioned above. After the above-mentioned specific E-mail selection means chooses the above-mentioned specific E-mail, it is the composition of having a reply means to detect the state of the above-mentioned printer and to answer the sending person of the above-mentioned specific E-mail.

[0107] So, the sending person of an E-mail does the effect that it can be distinguished whether it is necessary to get to know and broadcast again what the transmitted E-mail finally became.

[Brief Description of the Drawings]

[Drawing 1] It is the block diagram showing the composition of the printer server in the form of 1 operation of this invention.

[Drawing 2] It is the block diagram showing the composition of the network equipped with the printer server of drawing 1 .

[Drawing 3] It is a flow chart explaining the flow of the processing at the time of the printer server of drawing 1 receiving an E-mail.

[Drawing 4] It is the block diagram showing the composition of the printer server in the form of other operations of this invention.

[Drawing 5] It is the block diagram showing the composition of the network equipped with the printer server of drawing 4 .

[Drawing 6] It is a flow chart explaining the flow of the processing at the time of the printer server of drawing 4 receiving an E-mail.

[Drawing 7] It is the block diagram showing the composition of the printer server [in / further / the form of other operations] of this invention.

[Drawing 8] It is the block diagram showing the composition of the network equipped with the printer server of drawing 7 .

[Drawing 9] It is a flow chart explaining the flow of the processing at the time of the printer server of drawing 7 receiving an E-mail.

[Drawing 10] It is the block diagram showing the composition of the printer server [in / further / the form of other operations] of this invention.

[Drawing 11] It is the block diagram showing the composition of the network equipped with the printer server of drawing 10 .

[Drawing 12] It is a flow chart explaining the flow of the processing at the time of the printer server of drawing 10 receiving an E-mail.

[Drawing 13] It is the block diagram showing the composition of the network in the data transmission and reception by the conventional FAX.

[Drawing 14] It is the block diagram showing the composition of the network in the data transmission and reception by the conventional Internet.

[Explanations of letters or numerals]

1 Printer Server

1a Storage section (storage means)

1b Network transmission-and-reception **** (E-mail reading means)

1c Printer transmission-and-reception **** (E-mail output means)

1d Control section (control means)

4 Mail Server

5 Printer

11 Printer Server

21 Printer Server

21b Accumulation section (E-mail accumulation means)

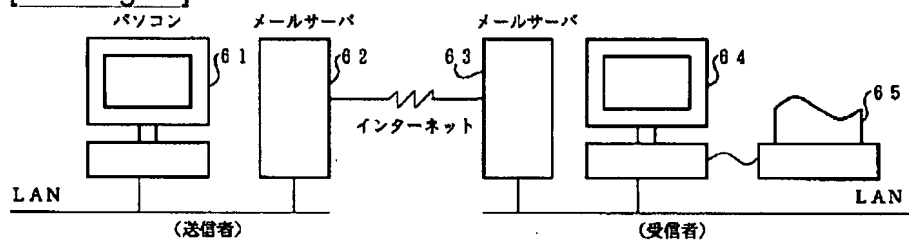
21c Selection section (specific E-mail selection means)

21d Printer transmission-and-reception **** (specific E-mail sending-out means)

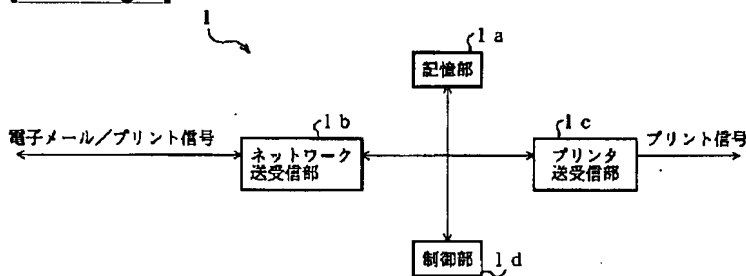
21e Control section (a directions means, reply means)

31 Printer Server

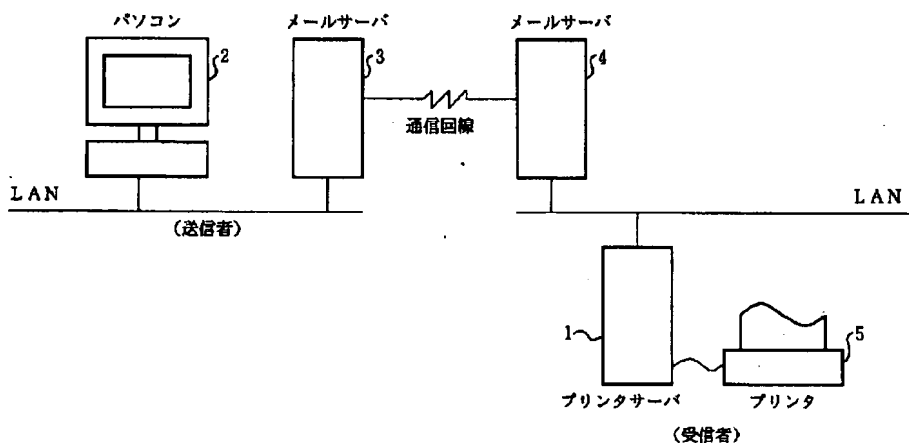
[Drawing 14]



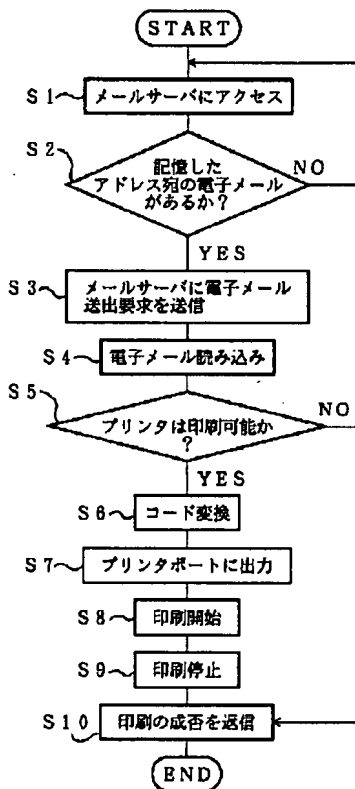
[Drawing 1]



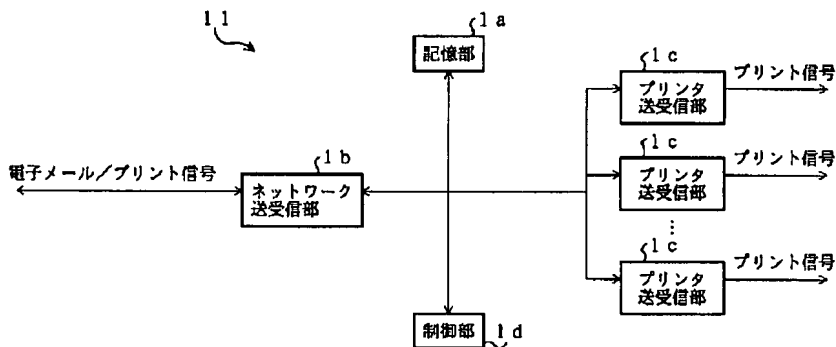
[Drawing 2]



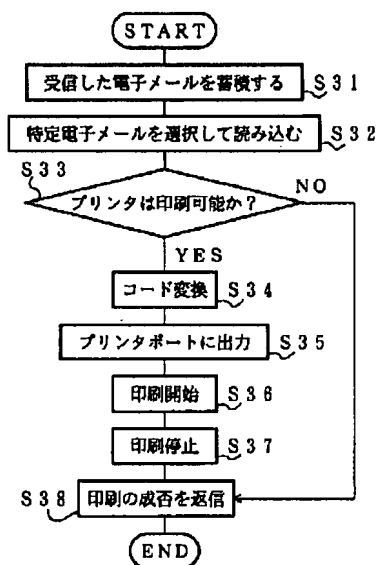
[Drawing 3]



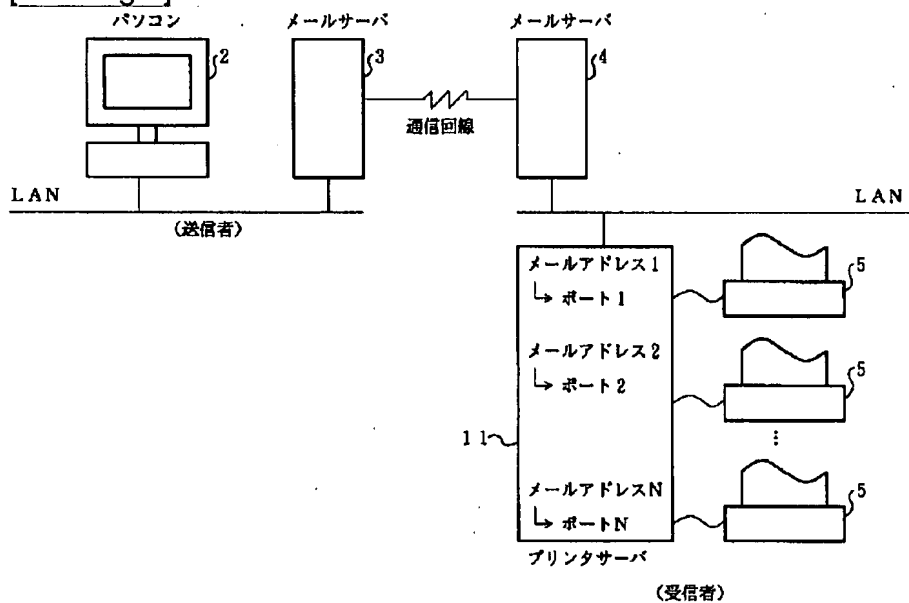
[Drawing 4]



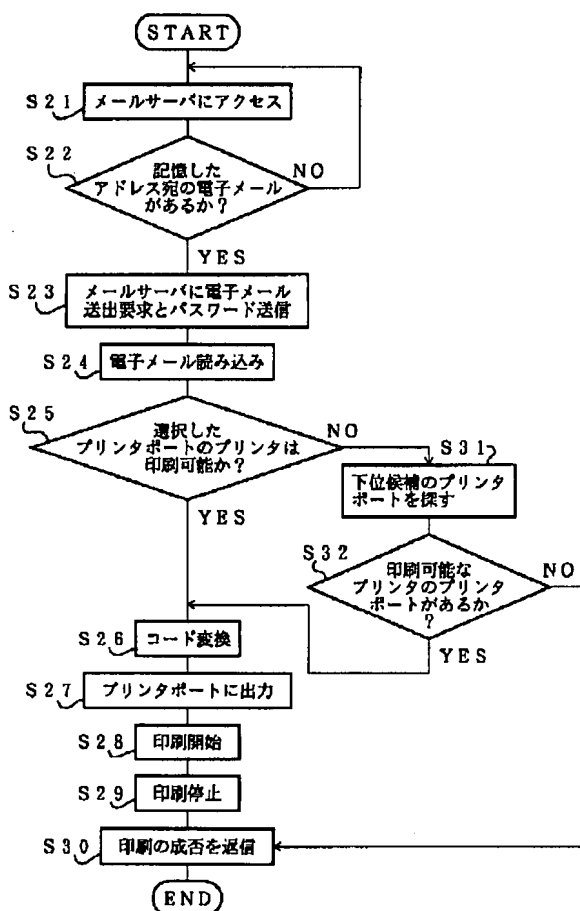
[Drawing 9]



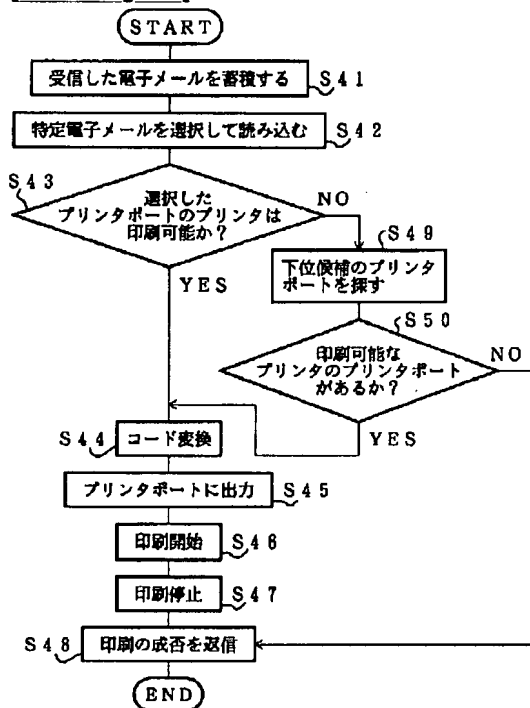
[Drawing 5]



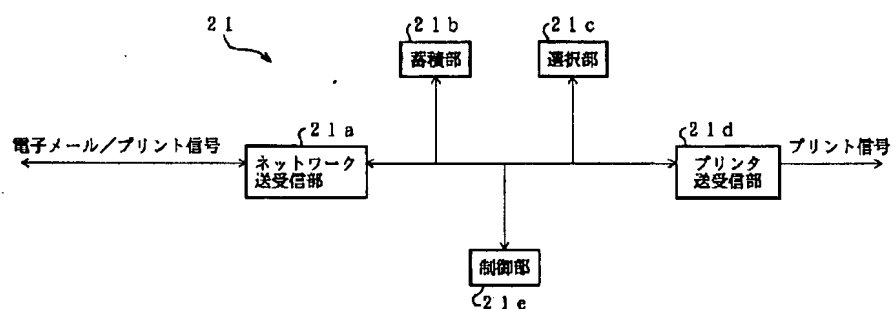
[Drawing 6]



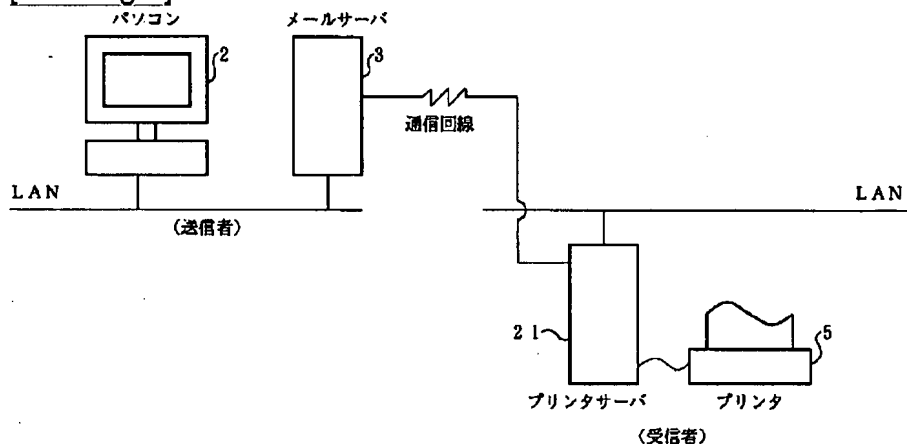
[Drawing 12]



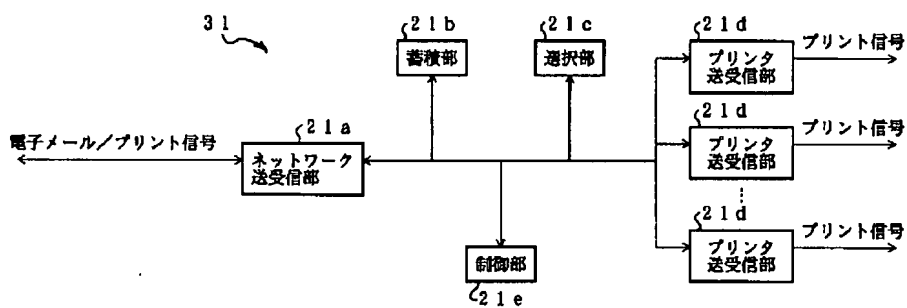
[Drawing 7]



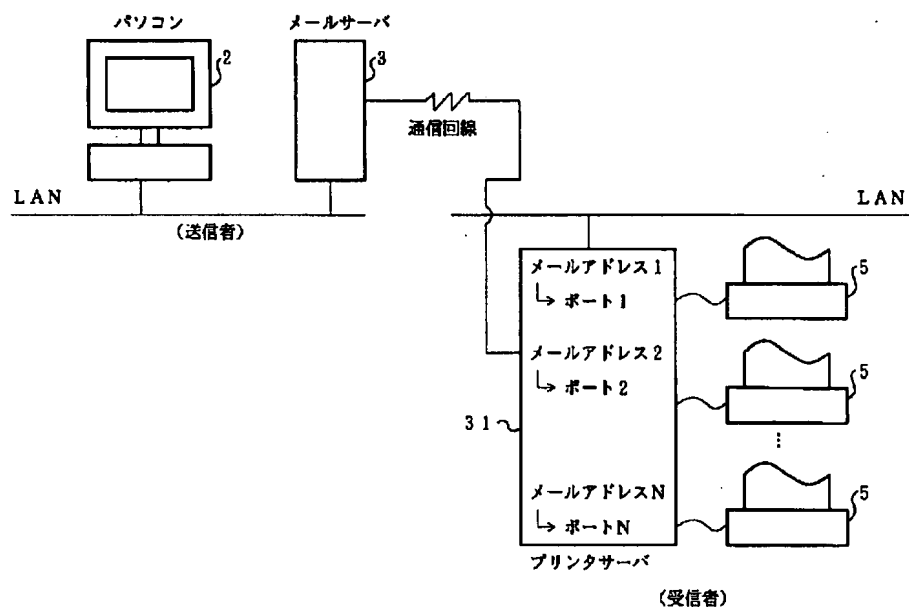
[Drawing 8]



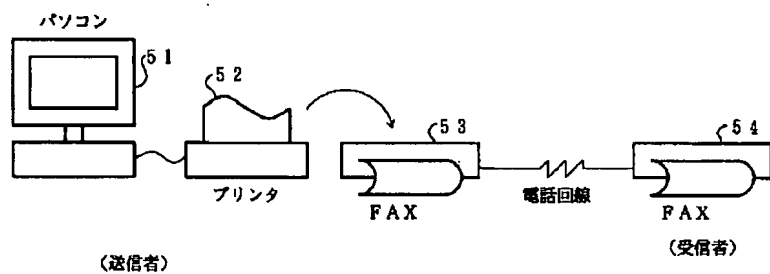
[Drawing 10]



[Drawing 11]



[Drawing 13]



[Translation done.]